



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0439; Product Identifier 2016-SW-074-AD; Amendment 39-19409; AD 2018-19-09]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2017-14-03 for Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters. AD 2017-14-03 required an inspection and reduced the retirement lives of certain landing gear components. This new AD retains the requirements of AD 2017-14-03, reduces the retirement lives of additional landing gear components, and requires repeating the inspection. This AD was prompted by a revised analysis of the fatigue life of the landing gear. The actions of this AD are intended to prevent an unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 11, 2017 (82 FR 34838, July 27, 2017).

ADDRESSES: For service information identified in this final rule, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0439.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> in Docket No. FAA-2018-0439; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference information, the economic evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is Docket Operations, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Dorie Resnik, Aviation Safety Engineer, Boston ACO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7693; email dorie.resnik@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to remove AD 2017-14-03, Amendment 39-18947 (82 FR 34838, July 27, 2017) (AD 2017-14-03) and add a new AD. AD 2017-14-03 applied to Sikorsky Model S-92A helicopters and required inspecting and reducing the retirement lives of certain landing gear components. AD 2017-14-03 was prompted by Sikorsky's updated fatigue analysis of the nose and main landing gear, which revealed that certain components required a reduced service life and one component required a repetitive visual and ultrasonic inspection. When we issued AD 2017-14-03, we determined that the age of the existing U.S. fleet and the compliance time for the repetitive inspection would allow enough time for notice and public comments on some actions.

The NPRM published in the Federal Register on May 17, 2018 (83 FR 22883). The NPRM proposed to retain the actions in AD 2017-14-03, reduce the life limits of additional components, and require repeating the visual and ultrasonic inspections. These actions are intended to detect and prevent cracks or failure of a landing gear component, which could result in damage and loss of control of the helicopter.

Comments

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

FAA's Determination

We have reviewed the relevant information and determined that an unsafe condition exists and is likely to exist or develop on other helicopters of this same type

design and that air safety and the public interest require adopting the AD requirements as proposed.

Related Service Information Under 1 CFR part 51

We reviewed Ultrasonic Inspection Technique No. UT 5077, Revision 0, dated July 25, 2014 (UT 5077). UT 5077 contains the inspection method, equipment and materials, calibration, and inspection procedure for performing an ultrasonic inspection of nose gear actuator fitting part number (P/N) 92209-01101-101.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

We also reviewed Sikorsky S-92 Helicopter Alert Service Bulletin 92-32-004, Basic Issue, dated January 30, 2015 (ASB). The ASB describes procedures for conducting a visual inspection of the nose landing gear (NLG) airframe fitting assembly and an ultrasonic inspection by following the procedures in UT 5077.

Costs of Compliance

We estimate that this AD affects 80 helicopters of U.S. Registry.

We estimate that operators may incur the following costs in order to comply with this AD. At an average labor rate of \$85 per work-hour:

- Replacing a wheel axle P/N 2392-2334-001 requires 2 work-hours and required parts cost \$22,000, for a cost per helicopter of \$22,170.

- Replacing a main landing gear (MLG) or NLG threaded hinge pin P/N 2392-2311-003 requires 1 work-hour and required parts cost \$3,800, for a cost per helicopter of \$3,885.
- Replacing a NLG cylinder P/N 2392-4006-005 requires 1 work-hour and required parts cost \$27,200, for a cost per helicopter of \$27,285.
- Replacing a NLG hinge pin P/N 2392-4312-003 requires 1 work-hour and required parts cost \$4,400, for a cost per helicopter of \$4,485.
- Replacing a landing gear actuator rod end P/N 2392-0876-901 requires 1 work-hour and required parts cost \$900, for a cost per helicopter of \$985.
- Replacing a MLG cylinder P/N 2392-2006-005 requires 2 work-hours and required parts cost \$33,100, for a cost per helicopter of \$33,270.
- Replacing a MLG pin outboard P/N 2392-2312-003 requires 1 work-hour and required parts cost \$4,300, for a cost per helicopter of \$4,385.
- Replacing a MLG bulkhead left-hand side P/N 92201-08111-105, -107, and -109 requires 70 work-hours and required parts cost \$12,550, for a cost per helicopter of \$18,500.
- Replacing a MLG bulkhead right-hand side P/N 92201-08111-106, -108, and -110 requires 70 work-hours and required parts cost \$12,550, for a cost per helicopter of \$18,500.
- Inspecting the NLG airframe fitting assembly P/N 92209-01101-041 requires 8 work-hours, and required parts cost is minimal, for a cost of \$680 per helicopter and \$54,400 for the U.S. fleet, per inspection cycle.

- If required, replacing a NLG actuator fitting P/N 92209-01101-101 requires 70 work-hours, and required parts cost \$10,000, for a cost per helicopter of \$15,950.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska to the extent that a regulatory distinction is required, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2017-14-03, Amendment 39-18947 (82 FR 34838, July 27, 2017), and adding the following new AD:

2018-19-09 **Sikorsky Aircraft Corporation (Sikorsky)**: Amendment 39-19409; Docket No. FAA-2018-0439; Product Identifier 2016-SW-074-AD.

(a) Applicability

This AD applies to Sikorsky Model S-92A helicopters, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as fatigue failure of the landing gear. This condition could result in failure of the landing gear and subsequent damage to and loss of control of the helicopter.

(c) Affected ADs

This AD replaces AD 2017-14-03, Amendment 39-18947 (82 FR 34838, July 27, 2017).

(d) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(f) Required Actions

(1) Before further flight, remove from service any part that has accumulated the number of landing cycles listed in Table 1 to paragraph (f)(1) of this AD. Thereafter, remove from service any part before accumulating the number of landing cycles listed in Table 1 to paragraph (f)(1) of this AD. For purposes of this AD, a landing cycle is counted anytime the helicopter lifts off into the air and then lands again regardless of the duration of the landing and regardless of whether the engine is shut down. If the number of landing cycles is unknown, multiply the number of hours time-in-service by 4.5 to determine the number of landing cycles.

Part Name	Part Number (P/N)	Life Limit
Main landing gear (MLG) wheel axle	2392-2334-001	22,300 landing cycles
MLG or nose landing gear (NLG) threaded hinge pin	2392-2311-003	26,100 landing cycles
NLG cylinder	2392-4006-005	26,300 landing cycles
NLG hinge pin	2392-4312-003	26,700 landing cycles
Landing gear actuator rod end	2392-0876-901	41,700 landing cycles
MLG cylinder	2392-2006-005	76,300 landing cycles
MLG pin outboard	2392-2312-003	50,300 landing cycles
MLG bulkhead (left-hand side)	92201-08111-105 92201-08111-107 92201-08111-109	58,400 landing cycles
MLG bulkhead (right-hand side)	92201-08111-106 92201-08111-108 92201-08111-110	58,400 landing cycles

Table 1 to Paragraph (f)(1)

(2) For helicopters with 31,600 or more landing cycles and an NLG airframe fitting assembly P/N 92209-01101-041 installed, before further flight and thereafter at intervals not to exceed 1,989 landing cycles:

(i) Using a 10X or higher power magnifying glass, inspect each bushing (P/N 92209-01101-102 and P/N 92209-01101-103) and all visible surfaces of mating lug fittings adjacent to each bushing for fretting, corrosion, wear, and scratches. If there is fretting, corrosion, wear, or a scratch more than 0.0005 inch deep, replace the NLG airframe fitting assembly before further flight.

(ii) Ultrasonic inspect each NLG actuator fitting P/N 92209-01101-101 in accordance with Sikorsky Ultrasonic Inspection Technique No. UT 5077, Revision 0, dated July 25, 2014 (UT 5077), except you are not required to report to or contact Sikorsky. If there are any anomalies or suspect indications, replace the NLG actuator

fitting before further flight.

Note 1 to paragraph (f)(2)(ii) of this AD: A copy of UT 5077 is attached to Sikorsky S-92 Helicopter Alert Service Bulletin 92-32-004, Basic Issue, dated January 30, 2015.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston ACO Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Dorie Resnik, Aviation Safety Engineer, Boston ACO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7693; email dorie.resnik@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(h) Additional Information

Sikorsky S-92 Helicopter Alert Service Bulletin 92-32-004, Basic Issue, dated January 30, 2015, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may review this service information at the FAA, Office of the Regional Counsel, Southwest Region,

10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 3200 Main Landing Gear and 3220 Nose Landing Gear.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on August 11, 2017 (82 FR 34838, July 27, 2017).

(i) Ultrasonic Inspection Technique No. UT 5077, Revision 0, dated July 25, 2014.

Note 2 to paragraph (j)(3)(i): Ultrasonic Inspection Technique No. UT 5077, Revision 0, dated July 25, 2014, is an attachment to Sikorsky S-92 Helicopter Alert Service Bulletin 92-32-004, Basic Issue, dated January 30, 2015, which is not incorporated by reference.

(ii) Reserved.

(4) For Sikorsky service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S

or 203-416-4299; email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>.

(5) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on September 12, 2018.

Scott A. Horn,

Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2018-20488 Filed: 9/24/2018 8:45 am; Publication Date: 9/25/2018]